

ABSTRACT**DATA PROCESSING APPARATUS AND METHOD**

A system for watermarking and distributing material includes a data processing
5 apparatus, which operates as a watermark encoder. The data processing apparatus is
operable to process an original material item to form a reduced-bandwidth-version of
the material item, marked with a code word from a predetermined set of code words.
The data processing apparatus is operable to form an impaired version of the material
item from which a marked representation of the original material item can be formed.
10 The impaired version is formed by subtracting the reduced-bandwidth-version of the
material item from a copy of the original material item. As such, the impaired version
can be mass distributed, but a representation of the original material item cannot be
formed without the reduced-bandwidth-version of the material item. By watermarking
the reduced-bandwidth-versions, a representation of the material item, formed by
15 combining one of the marked reduced-bandwidth-versions with the impaired material
item, can be uniquely identified. However, only a low bandwidth part of the material
item need be watermark encoded, which is more easily distributable to individual
recipients than watermarked copies of the original material item.

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[Fig 5]